

Building Regulations and Specification notes:

ROOMS IN ROOF

See Structural Engineers details and call for structural steelwork to roof.

Steel beams built in to load bearing wall on bearing plates or padstones as specified.

FORM GABLES

Open north and south walls at eaves and prepare for raising in cavity construction on new cavity tray and weepholes @ 1200 c/cs Sand/cement or facings finish to match existing on CELOTEX rigid insulation. Skimmed plasterboard on dabs to internal surface

EXISTING ROOF (U=0.20)

Increase depth of rafters to 50x150 C24 @ 400 c/c

MAIN ROOF VOID

Insulation of 270 mineral wool or 135mm CELOTEX or equal thermal resistance.

Insulation of roof void skillings by means of 135mm Celotex, 90mm between and 45mm under rafters. 50mm air gap is to be maintained

VENTILATION OF ROOF

Maintain 50mm air gap from eaves to ridge with equivalent 2mm continuous gap at eaves and four ridge vents.

DORMER ROOF (U=0.20)

High performance torched-on membrane to BS 747 fixed in accordance with BS CP144 to manufacturers' instructions on 12mm ply decking on treated s/w firings on 50 x 147 s/w joists C24 @ 400 c/c

50mm air gap 90mm CELOTEX insulation between joists and 45mm Celotex insulation under joists

Ceiling 12.5mm foil-backed plasterboard, skimmed

DORMER CHEEKS

Double 50 x 150mm s/w joists to support dormer cheeks.

Concrete plain tile hanging on treated s/w battens on sarking felt BS 747 on 4mm Masterboard on studwork.

100mm CELOTEX insulation between studs.

Internal surface of 12.5mm fireline plasterboard on 12.5mm foil backed plasterboard fixed to studwork.

Beam: B1
Span: 3.4 m. Reactions: R1: 27.05 kN R2: 26.83 kN
Use 203 x 133 x 25 UB Grade 43
Bearing R1: 450 x 100mm padstone
Bearing R2: 450 x 100mm padstone

Beam: Floor Joists
Span: 4.1 m. Reactions: R1: 2.05 kN R2: 2.42 kN
Use 50 x 220 C24
Use 220 x 50 C24 at 400mm centres as floor joists.

Beam: Alternative Floor Joists
Span: 4.1 m. Reactions: R1: 2.05 kN R2: 2.42 kN
Use 2no 50 x 175 C24
Use 2 x 175 x 50 C24 at 400mm centres as floor joist.

Beam: T3
Span: 3.0 m. Reactions: R1: 2.89 kN R2: 2.89 kN
Use 2no 50 x 175 C24

Beam: T2
Span: 1.0 m. Reactions: R1: 5.13 kN R2: 5.13 kN
Use 2no 50 x 175 C24

Beam: T1
Span: 1.0 m. Reactions: R1: 0.46 kN R2: 0.46 kN
Use 2no 50 x 175 C24

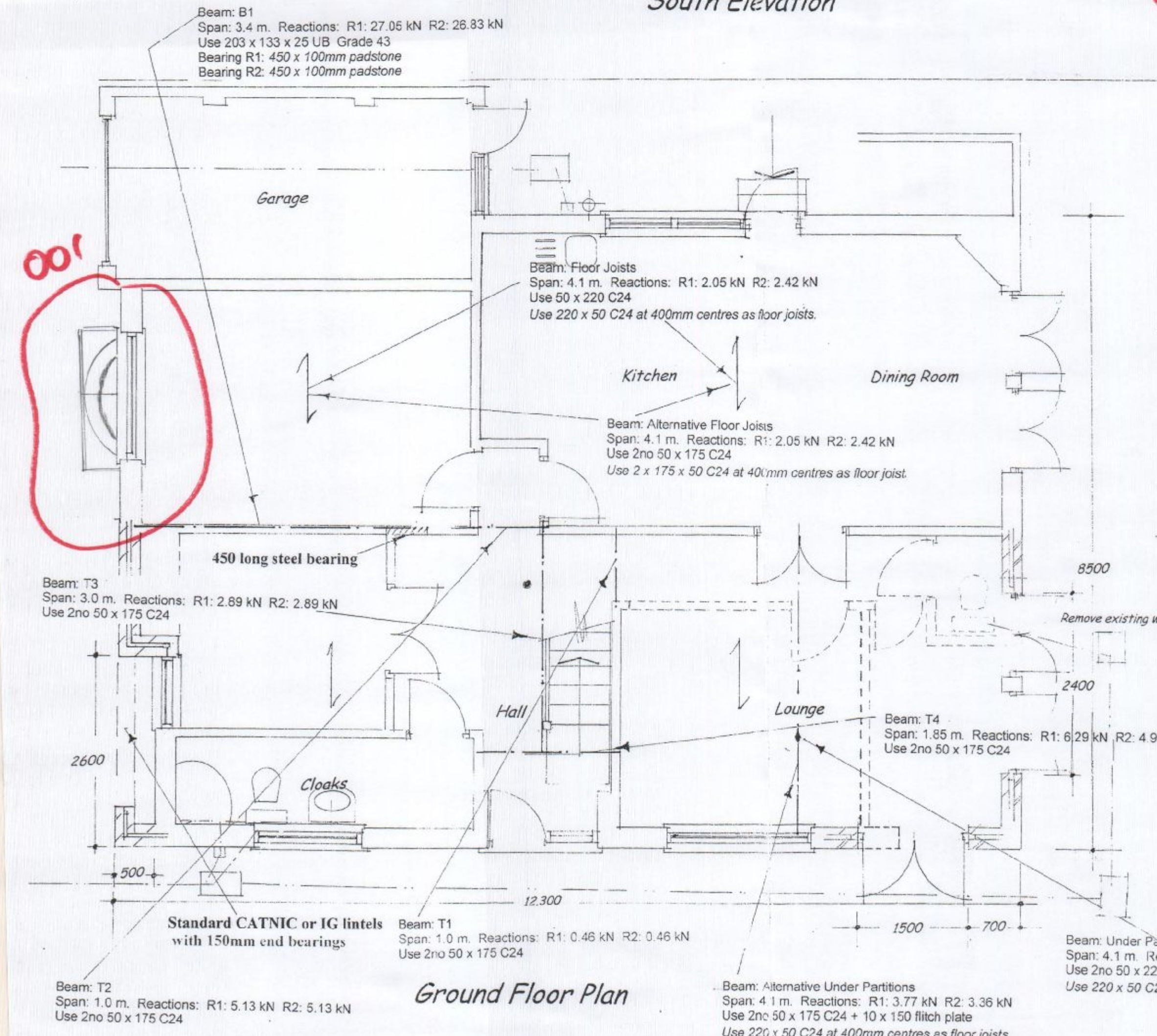
Beam: T4
Span: 1.85 m. Reactions: R1: 6.29 kN R2: 4.90 kN
Use 2no 50 x 175 C24

Beam: Under Partitions
Span: 4.1 m. Reactions: R1: 3.77 kN R2: 3.36 kN
Use 2no 50 x 220 C24
Use 220 x 50 C24 at 400mm centres as floor joists.

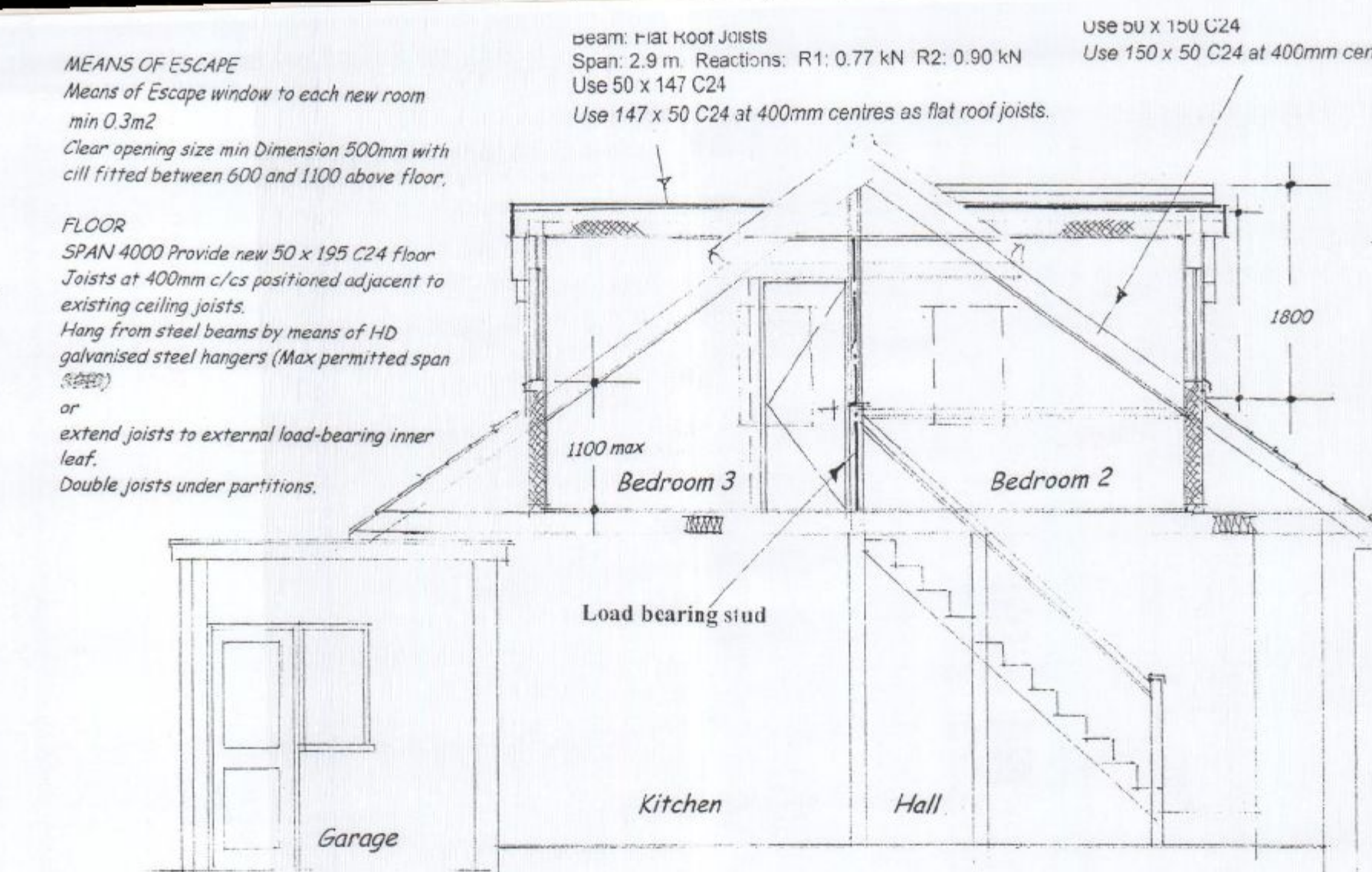
Beam: Alternative Under Partitions
Span: 4.1 m. Reactions: R1: 3.77 kN R2: 3.36 kN
Use 2no 50 x 175 C24 + 10 x 150 flitch plate
Use 220 x 50 C24 at 400mm centres as floor joists.

Beam: Cranked Spread Beam
Span: 2.3 m. Reactions: R1: 6.66 kN R2: 6.66 kN
Use 152 x 89 x 16 UB Grade 43
Bearing R1: 125 x 100mm padstone
Bearing R2: 125 x 100mm padstone
Full strength built welds at cranks and end plates.

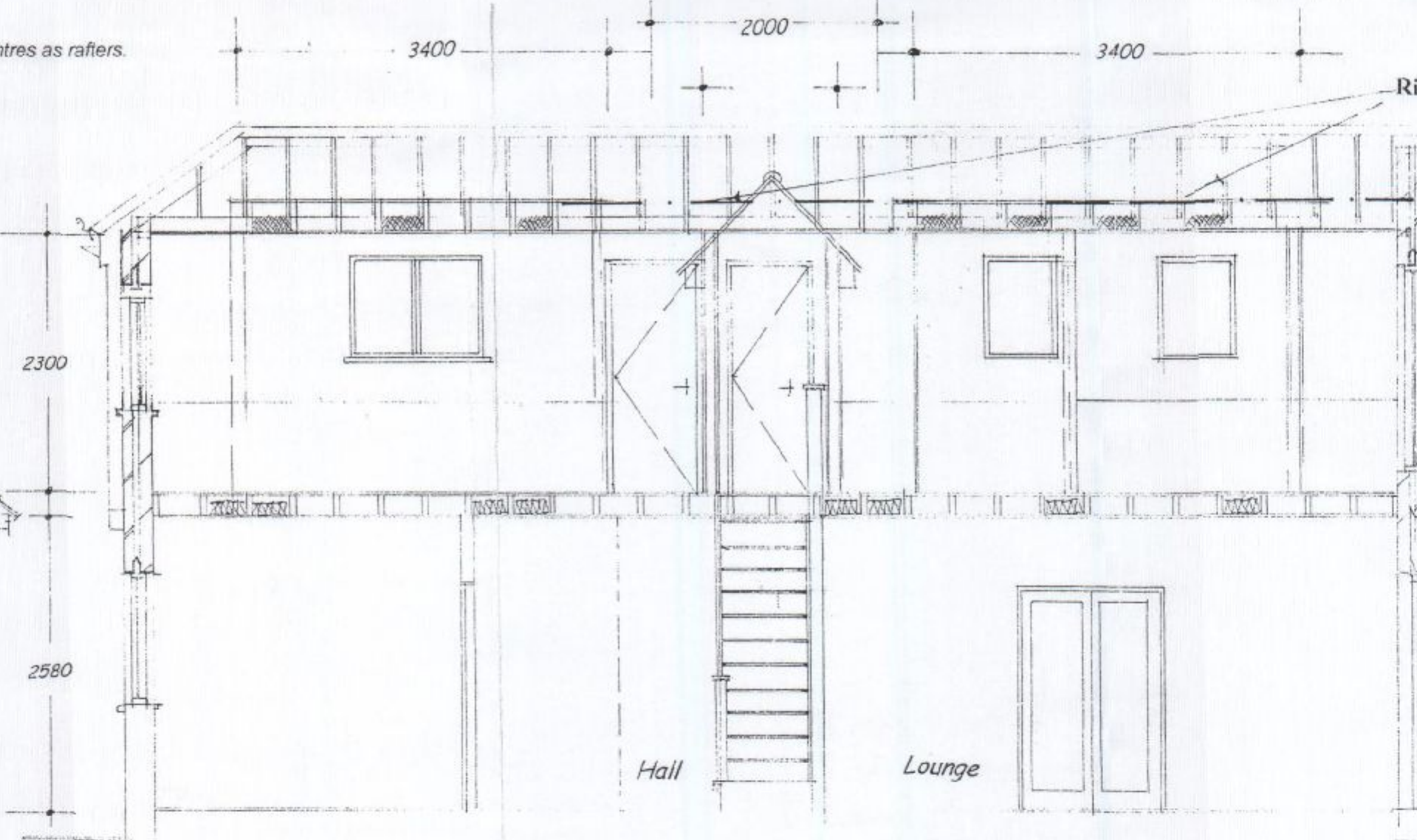
Beam: Ridge Beams
Span: 2.9 m. Reactions: R1: 7.71 kN R2: 8.84 kN
Use 2no 50 x 220 C24



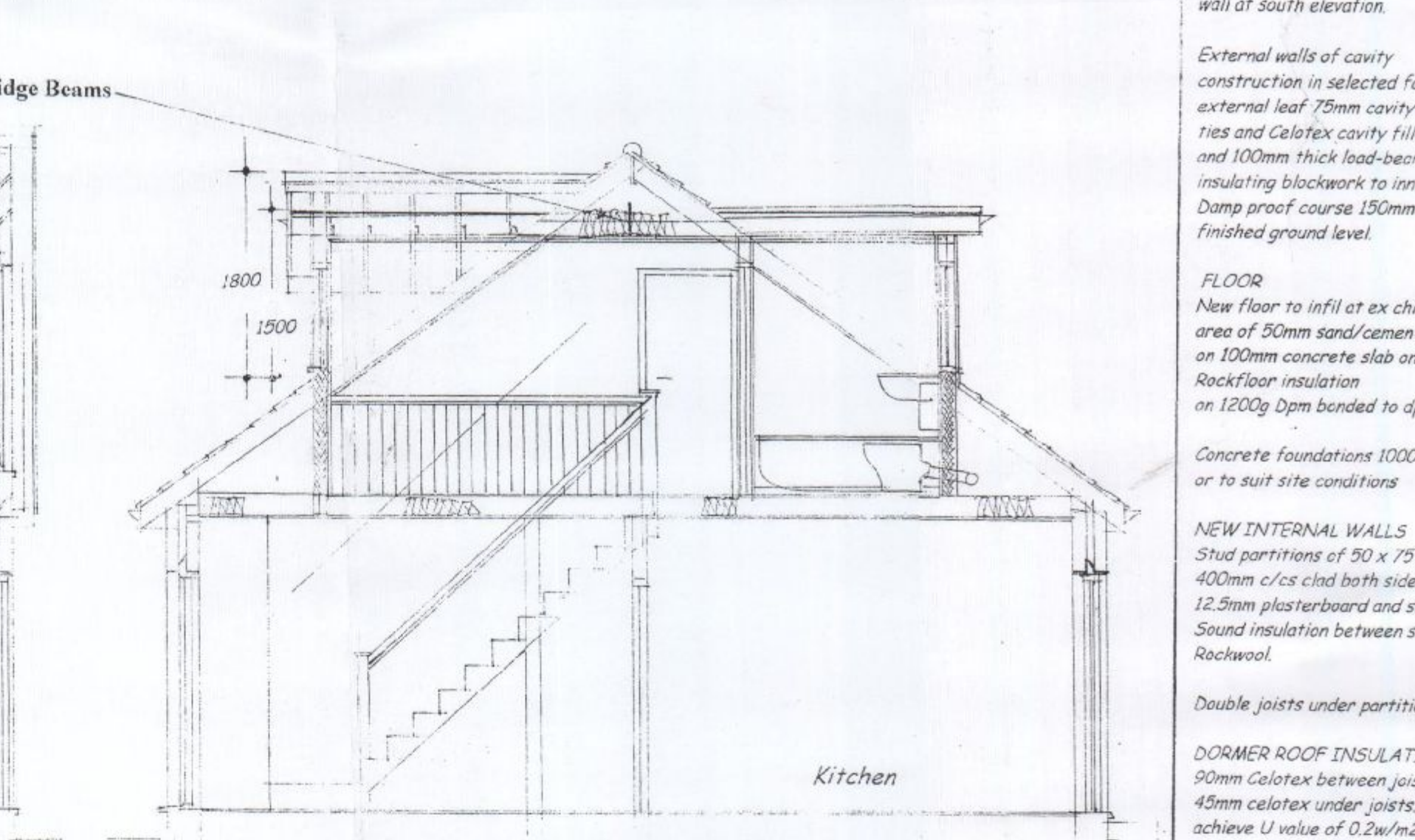
Ground Floor Plan



Section A-A



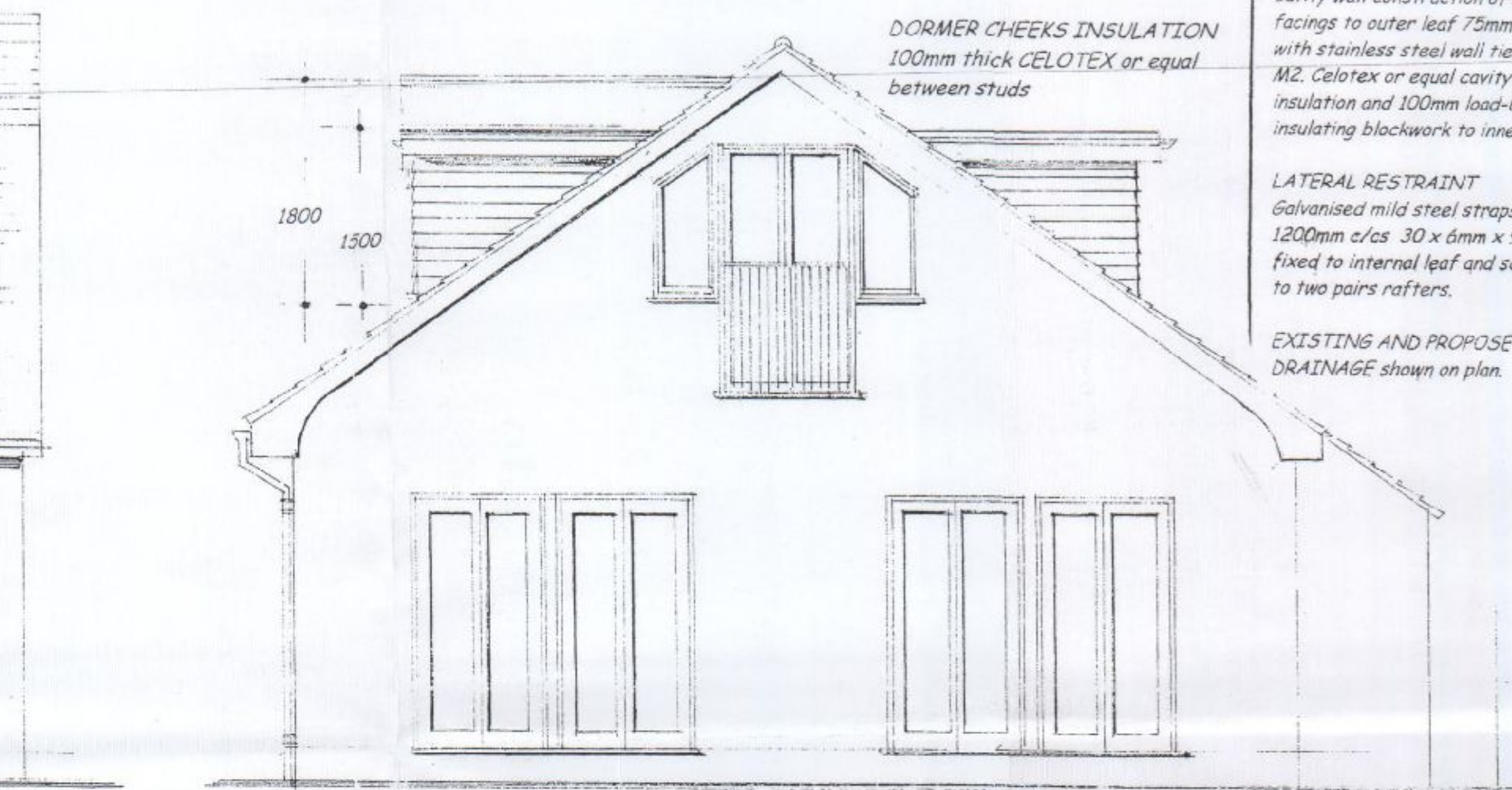
Section B-B



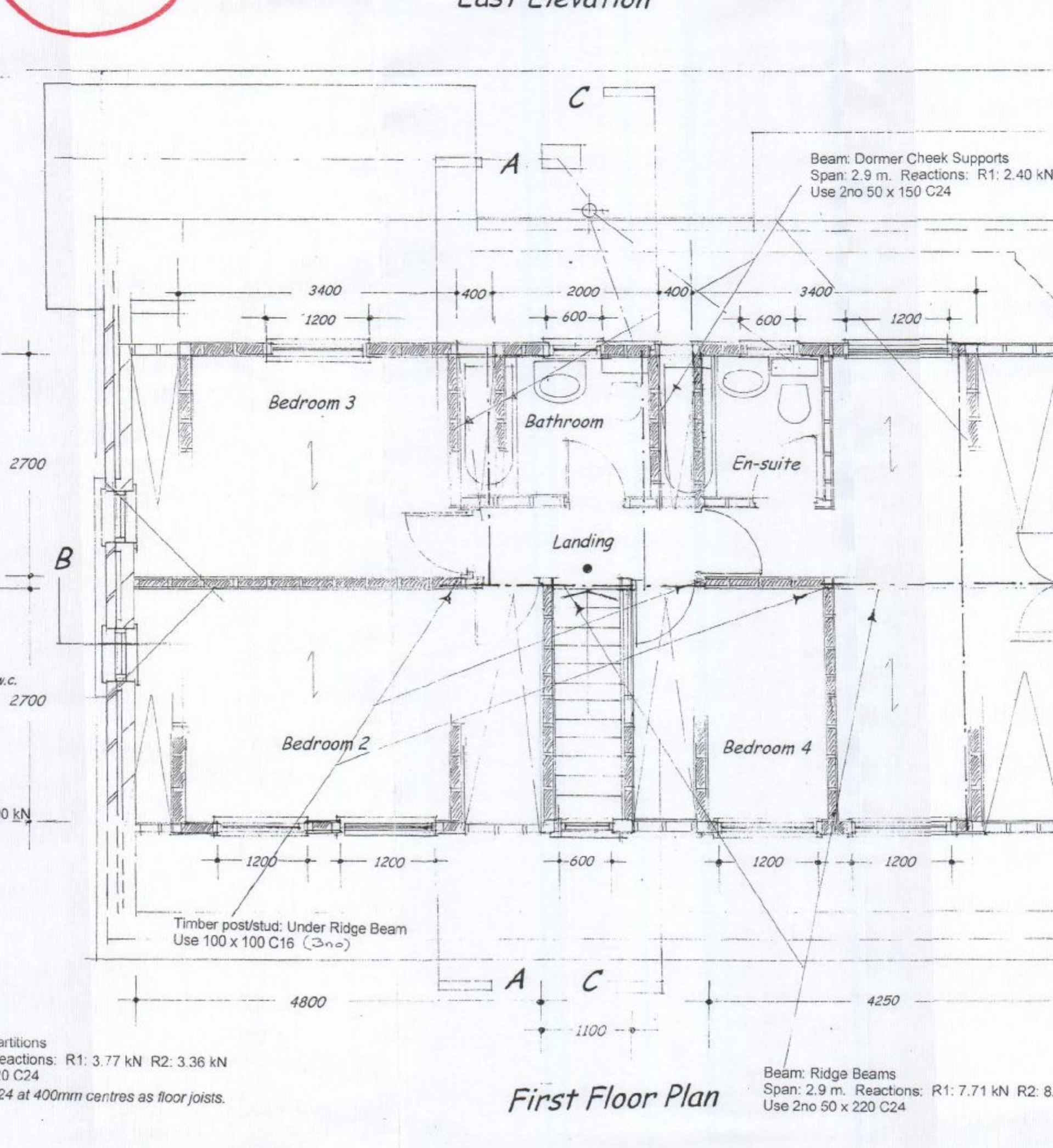
Section C-C



East Elevation



North Elevation



First Floor Plan

Any glazing in door to be fire resistant or wired.

New door to rooms in the roof to be FD30

STAIRS AS EXISTING

Staircase enclosure to be half hour fire resisting.

Studwork clad both sides in 12.5mm plasterboard and skimmed.

Staircase 800mm wide rise in 13 equal risers. Maximum riser 220. Minimum going 220mm. Pitch max 42 degrees. Handrail height 900mm. Handrail to clear trimmer min 30mm. Minimum clearance 2000. No gap to exceed 100mm.

Floor to new room in roof to be of half hour fire resistant construction T&G boarding on 50 x 195 C24 @ 400c/c joists, 12.5mm plasterboard, plastered soffit.

SOUND INSULATION

100mm mineral wool between floor joists.

Mineral wool sound insulation between stud in internal partitions.

WINDOWS (U=1.80)

Windows to habitable rooms to have openable area not less than 1/20th floor area.

White Upvc double glazed windows Low E glass reinforced frames to be manufactured and installed by FENSA certificated firm and certified on completion. Trickle vents to be fitted.

Glass in critical areas to be toughened to comply with Part N

BACKGROUND VENTILATION

8000mm² Background ventilation to habitable rooms

EXTRACT FANS

Install 15 l/sec extract fan to bathroom and en-suite

FIRE DETECTION ALARMS

Wired direct to mains with battery back-up, provide two smoke detectors located one on each floor in stairway, both alarms linked to sound simultaneously.

ELECTRICAL

Electrical installation as Client's schedule to IEE regulations.

Electrical installation to be carried out by a person competent to do so. Certified on completion in accordance with part P.

Energy efficient light bulbs to be fitted in circulation areas and bathroom.

HEATING AND HOT WATER

By existing gas fired condensing boiler sited as shown on plan.

Any new radiators are to be fitted with TRVs

PLUMBING

New Wc fitting connected to existing services: wastes to BS 5972 as follows: Basin 32mm dia, Shower 40mm dia both with 75mm deep seal traps

We connected to manifold connected to new 50p fitted with wire cage terminal at 900 above any opening within 3 metres.

or internal air admittance valve fitted above flood level of basin

Rainwater goods in black discharging via downpipes and shoes to existing surface of roofs.

Existing foundations and lintels to be checked for suitability prior to commencement.

Proposed Rooms in ROOF

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Scale 1:50; 1:100

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BCO amendments added. Calls added. June 2008

PERMIT

External walls of cavity construction in selected facings external leaf 75mm cavity with ties and Celotex cavity fill insulation and 100mm thick load-bearing insulating blockwork to inner leaf. Damp proof course 150mm above finished ground level.

FLOOR

New floor to infill at ex chimney area of 50mm sand/cement screed on 100mm concrete slab on 75mm Rockfloor insulation on 1200g Dpm bonded to dpc

Concrete foundations 1000mm deep, or to suit site conditions

NEW INTERNAL WALLS

Stud partitions of 90 x 75 studs at 400mm c/c clad both sides with 12.5mm plasterboard and skimmed. Sound insulation between studs of Rockwool.

Double joists under partitions.

DORMER ROOF INSULATION

90mm Celotex between joists and 45mm celotex under joists, to achieve U value of 0.2w/m²k

GABLE WALLS

Cavity wall construction of selected facings to outer leaf 75mm cavity with stainless steel wall ties 4.5 per M2. Celotex or equal cavity fill insulation and 100mm load-bearing insulating blockwork to inner leaf.

LATERAL RESTRAINT

Galvanised mild steel straps at 1200mm c/c 30 x 6mm x 900 long fixed to internal leaf and screwed to two pairs rafters.

EXISTING AND PROPOSED DRAINAGE shown on plan.